

CASQA Comments on Revised Draft General Permit for Small MS4s

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CASQA Comments – Highlights

- Receiving Water Limitations
- Regional Board Discretion
- Central Coast Post-Construction Requirements

Receiving Water Limitations

- Request that SWRCB not defer this issue to a later date via a reopener clause
- Recommend that the Board address this issue in this permit
- Based on Nov 20 workshop, we believe the SWRCB has sufficient input to develop a resolution
- CASQA offers support and assistance in addressing this issue

Regional Board Discretion

- Dispute Resolution provision was added to this version of the draft Permit
- Reaction-based approach
- Recommend a discretion exercise request process
 - When Regional Boards want to exercise discretion, submit request that makes case why discretion is needed
 - Request to be reviewed and approved/denied by SWRCB Executive Director

Central Coast Post-Construction Requirements – Background

- Central Coast Joint Effort developed by team of technical experts
- Resulted in watershed characterization methodology and mapping
- Design Criteria in Attachment J not part of state funded effort
 - Att. D sizing method developed by Regional Water Board staff after the public review process
- Footnote in fact sheet indicates that “similar requirements” will be incorporated for remainder of Phase II Permittees

Central Coast Post-Construction Requirements

Primary concerns:

- Process
- Inconsistent
- Untested
- Confusing

Process

- Adoption would nullify existing Region 3 permittee petitions filed with the State
- Denies petitioners due process rights
- No value added by adopting the Central Coast requirements
- Additionally not adequate time or notice for review if same requirements are adopted statewide in future

Inconsistent

- Three Sets of Standards:
 - Post-construction criteria via the Construction General Permit
 - Different criteria proposed in E.12 of draft Phase II permit
 - Now introducing a third set via the Central Coast Requirements
- E.12 presents a straightforward approach
- Central Coast Post-Construction Standards has many variations and offramps
 - Subject to creative interpretation
 - Provides little assurance regarding what type of stormwater quality management we will get from site-to-site - unpredictable

Inconsistency Examples

- Project thresholds
 - E12: two tiers (small and large projects)
 - Central Coast Att. J: four tiers
- Sizing criteria
 - E12: 85th percentile or 4% of impervious area
 - Central Coast Att. J: 85th, 95th, 85th/95th x 1.963, unless infeasible, then 10% of EISA, add peak flow control...
- BMP design specifications
 - 18" (E12) vs. 24" (Att. J) planting soil depth
 - Infiltration/harvesting/ET vs. infiltration only

Size Comparison E.12 and Att. J

One acre impervious site (43,560 ft²)

Bioretention simple sizing method assumes design volume for Santa Barbara rain gage is provided in 6 in. ponded water and 3 ft. media void space

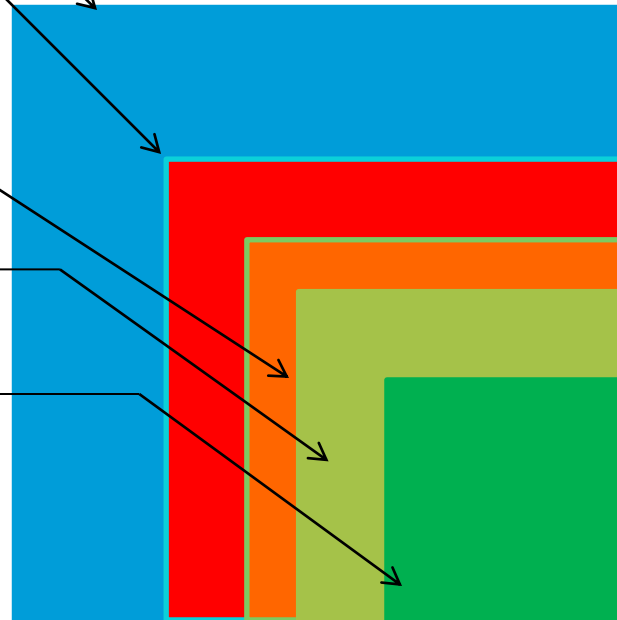
95% runoff volume w/
multiplier

85% runoff volume w/
multiplier

10% of impervious

85% runoff volume

4% of impervious



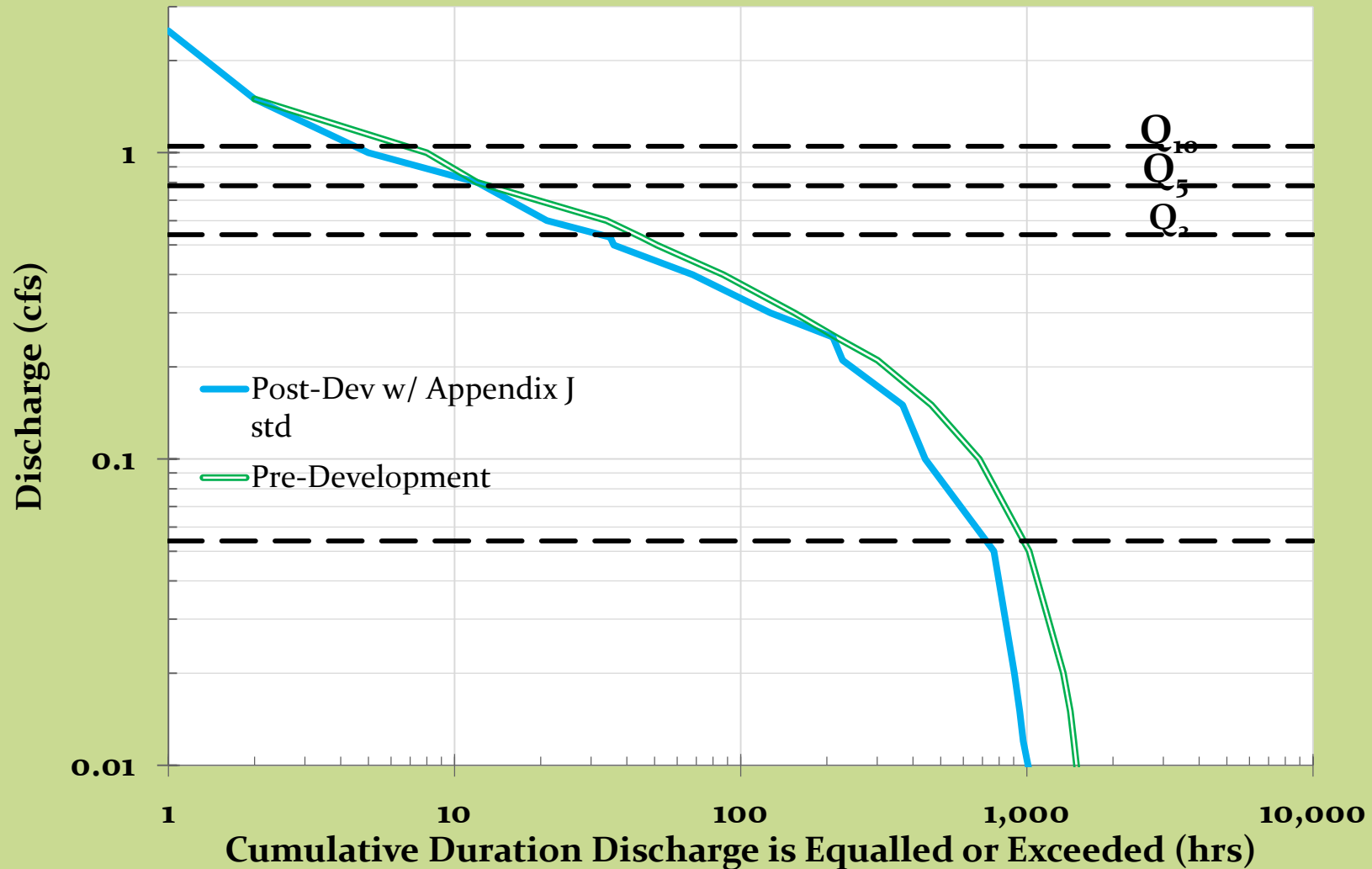
Untested

- Technical basis is inconsistent with current science in 2012 SWRCB/SCCWRP Hydromodification Management report
- No justification for the significant increased space requirements and cost for implementation
- Similarly, no justification for having requirements that are separate and greater than E.12
- Central Coast permittees may develop own sizing methods, but equivalency and Regional Board approval required

Untested, continued

- Goal is to “maintain watershed processes” such as overland flow, infiltration, base flow, and sediment transport
- Members of CASQA Phase II subcommittee ran a continuous simulation model to examine effects of different criteria
 - No performance gain in 24 in. vs. 18 in. media depth
 - More runoff is captured and retained with App. J standard (maximized at 10% of site) than in undeveloped condition

Flow Duration Curve Comparison



Summary: Bioretention sized per App. J results in oversized BMPs

Santa Barbara rain gage, K_{sat} undeveloped = 0.05 in/hr, K_{sat} under bioretention = 0.2 in/hr, bioretention w/ 6 in ponding, 24 in media, 12 in gravel covering 10% of one acre impervious area.

Confusing

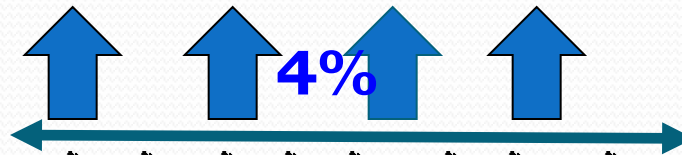
- Multiple tiers, sizing standards, and offramps – will lead to creative interpretation and uncertainty in outcomes
- Different design requirements apply to different size projects and different management zones
- Requires redevelopment projects outside of an approved Urban Sustainability Area to multiply replaced impervious surface by 0.5
- When does the 10% sizing maximum apply?

Central Coast Requirements: Recommendations

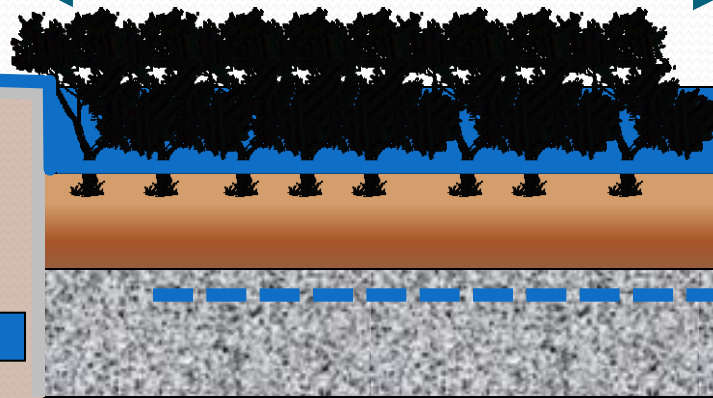
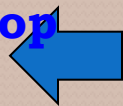
- E.12 was developed over a 2 year period with general agreement amongst stakeholders, is easy to interpret and implement
- Delete all references to the Central Coast Post-Construction Requirements and Attachment J
- Allow one permit cycle to implement E.12 as proposed
- During this time, thoughtfully work out how watershed management zones will be incorporated into post-construction standards in next permit term in a technically-correct and implementable manner

Bioretention (Provision E.12)

evapotranspiration



**Underdrain at top
of gravel layer**



6" reservoir

18" sand/compost

12" gravel

open bottom



**infiltration
as soils allow**

**discharge
after filtration**